

OBSERVATIONS
ON THE
VARIOLOID DISEASE,
OR ON
SMALL-POX,
UNDER THE FORM WHICH IT PRESENTS IN
PERSONS PREVIOUSLY VACCINATED,
ILLUSTRATED BY CASES AND EXPERIMENTS,
PUBLISHED WITH A VIEW TO A TRUE ESTIMATE OF
THE VALUE OF VACCINATION.

BY WILLIAM STOKER, M. D.

LICENTIATE OF THE COLLEGE, AND MEMBER OF THE ASSOCI-
ATION OF THE KING'S AND QUEEN'S COLLEGE OF PHYSI-
CIANS IN IRELAND; PHYSICIAN TO THE FEVER
HOSPITAL AND HOUSE OF RECOVERY CORK-
TREET, TO THE MOLYNEUX ASYLUM,
PETER-STREET, &c. &c. &c.

Non me cuiquam mancipavi, nullius nomen fero: multum magnorum
viro-rum judicio credo, aliquid et in eo vindico.—SENeca EPIST. 45.

DUBLIN:
PRINTED AT THE UNIVERSITY PRESS,
FOR HODGES AND M'ARTHUR, 21, COLLEGE-GREEN,
AND R. MILLIKEN, 104, GRAFTON-STREET.

1821.

DANIEL GRAISBERRY,
PRINTER TO THE UNIVERSITY.

DEDICATION.

TO EDWARD JENNER, ESQ. M. D.

SIR,

THE motives which led me to take a share in the inquiry that is the subject of the following short treatise, (the only claims I have on your patience,) will, I trust, be received as some apology for taking the sanction of your respected name, by prefixing it to a work so very limited in extent as mine is, and bearing, I fear, many marks of hasty composition.

Could I have produced a publication, the merits of which would in any degree equal my sense of the obligation your eminently valuable discovery has conferred on mankind, I would be proud, with such a work, to convey to you the expression of my high respect. But though this little work is not worthy of the name of book, such as (according to Bacon's opinion of dedications) "ought to have no patrons but truth and

reason," I have been induced to place it under the protection of your name.

In seeking that protection, I also indulge a hope to conciliate public opinion, with regard to the part I have, through my opportunities, been enabled to take in the investigation of the importance of vaccination as a preventive to small-pox ; as by submitting it to you it will be fairly implied, that I have sought after truth, and expressed my opinions without partiality or prejudice. In this I have endeavoured to imitate the candour which you have exhibited, both in your example and precepts ; and most remarkably so in the collection and examination of facts, which were to decide the merits of a discovery that places you, in the eyes of your fellow-creatures, amongst the greatest physical benefactors to the human race.

With such feelings of esteem and respect,

Sir,

I have the honor to be,

Your obedient humble servant,

WILLIAM STOKER.

York-street.

ADVERTISEMENT TO THE READER.

ONE of two evils, extremely opposite to each other, but equally to be dreaded, would probably arise, if the reports lately circulated to the prejudice of vaccination continued to prevail, without inquiry being instituted with respect to the facts from which they originated.

Incredulity (often opposed by the obstinate as an impenetrable shield to the evidence of truth, often also resorted to by the timid as an allay to the intolerance of their fears) might be expected to consign facts (even those which might suggest the means of preservation,) to oblivious neglect ;— or Alarm, which once excited, “*mobilitate viget, viresque acquirit, eundo,*” might quickly exaggerate or confound reports and their origin, so as to excite the most painful state of public disquiet, and increase the difficulty of detecting the fallacy of statements which groundlessly produced that excess of alarm.

These apprehensions appearing to me to be reasonable, I participated largely with parents and physicians in the satisfaction afforded by the auspicious commencement and progress of the investigation, which was undertaken by highly respectable medical observers in various parts of the United Kingdom well qualified to ascertain and to estimate both the nature and the amount of the alleged failures; and I also felt it my duty, in common with others, to accept the invitation given to assist in that investigation as far as opportunity would admit.

Accordingly I noted several cases of eruptive disease, which I found in connexion with small-pox, and affecting persons who had been previously vaccinated; conceiving that a detail of them, under such circumstances, might be still useful towards ascertaining the most frequent characters of such eruptions,—the proportion in society of those supposed to possess immunity by vaccination, who are found susceptible of being affected by them,—and the degree of sickness or danger attendant on them.

My intention (when drawing up the report of these cases, and the general remarks annexed to them) to offer it for insertion in some of the Lon-

don or Edinburgh Periodical Journals, was delayed for some time by a new train of events, which promised to afford interesting elucidation of the nature and origin of the eruptive diseases themselves ; and subsequently the acquisition of several valuable cases, with observations on them, (presented to me by my medical friends) whilst they conferred new value and interest on my treatise, increased its size so as to unfit it for a place in a journal, as was intended. Hence it became necessary to publish it in a separate form.

This advertisement therefore will, I trust, account to the reader for the desultory manner in which its various parts appear ; and I am also desirous he should know, as an apology for the apparent haste in which it is composed, that the extraordinary malignity of the small-pox for some time past in Ireland, and the increasing frequency with which vaccinated persons were latterly reported to be affected by it, urgently demanded that inquiry should be *speedily* made into the cause ; both with a view to devise new means of prevention, if necessary, and to oppose the rise and progress of undue alarm which was so much to be apprehended.

Bills of mortality or abstracts from parish registers shewing, as their name imports, the numbers that have died in any parish or place during certain periods of time, afford documents essentially useful and necessary to those who would trace the rise and progress of epidemics ; but they have not been satisfactorily preserved in Dublin, an omission which in so great a city is much to be regretted. This neglect affords, in this country, another reason for the immediate investigation of the occurrences which tended to give rise to the alarming question, with respect to the value of the preventive power of vaccination, because the difficulty of ascertaining the actual extent of mortality, from which alarming reports chiefly spring, and therefore how far such reports are exaggerated would be greater in this than in the metropolis of other countries, where such bills are carefully preserved.

Had we indeed such documents, they would, I am persuaded, afford decided evidence of the value of vaccination, and of the necessity for its being more generally adopted, by shewing the alarming numbers who were destroyed, even in the course of last year, within the precincts of this city by the natural small-pox, and also how very

few amongst the fatal examples, if any would be found to have undergone vaccination.

Some well attested instances of deaths from small-pox after vaccination, are no doubt on record ; and I believe we are not yet in possession of sufficient experience of the varioloid disease, either to calculate with certainty upon the probable degree of frequency of its future occurrence, or the danger, which under different circumstances may be connected with it. The result, however, of the observations I have made, coincides generally with what most other reporters have noticed, that it has not hitherto proved dangerous to human life.

Whether the reader will agree with me in the observations I have made on those facts which I witnessed, I shall not pretend to anticipate, but the truth of the facts themselves I can decidedly affirm.

“ Si quis hic abjiciat alios æquè in hac arte ver-
 “ satos non idem mecum de his rebus sentire ;
 “ meum non est quid sentiant alii disquirere, sed
 “ meis observationibus adstruere fidem, quod ut
 “ faciam, lectoris patientiam desidero tantum, non
 “ favorem.” Pref. Op. Univ. SYDEN. M. D.

INDEX

TO COMMUNICATIONS.

	PAGE
<i>First.</i> By Richard Carmichael, Esq. M. R. I. A one of the Surgeons of the Richmond Hospital, House of Industry, &c. &c.	38
<i>Second.</i> By Alexander Jackson, Esq. M. D. State Physician, Licentiate of the King's and Queen's College of Physicians, Phy- sician to the Lunatic Asylum of the House of Industry, &c. &c. 	43
<i>Third.</i> By Samuel Robinson, Esq. M. D. Physican to the Fever Hospital and House of Re- covery Cork-street, &c. &c 	48
<i>Fourth.</i>	57
<i>Fifth.</i> By John O'Brien, Esq. M. D. Fellow and Censor of the King's and Queen's Col- lege of Physicians in Ireland, Physician to the Fever Hospital and House of Re- covery Cork-street, &c. &c. 	62

A DETAIL
OF
ERUPTIVE DISEASES,
&c. &c.

THE efficacy of vaccination (as an antidote to the contagion of small-pock) the most valuable discovery to mankind, perhaps in Medical science (corroborated by experiments and satisfactory results, so numerous as to remove the doubts of the most scrupulous,) was established and generally adopted with the fullest confidence of security, until the reports lately circulated of its

failure in many instances, in which it had been previously employed.*

It is the duty of all to contribute whatever assistance they can afford in arresting the progress of excessive alarm, on a subject of such general interest and such vital importance, where, if there was room for a reasonable doubt, the previous feeling of security might be succeeded by apprehensions of the most loathsome and fatal disease, to which every individual of the human species from his birth is susceptible ;

“ Hoc opus, hic labor, est.”

Strict investigation and faithful narrative of facts, perhaps the only effectual, certainly the only justifiable means of quieting such alarms, have already been very successfully employed by many respectable Medical observers throughout the United Kingdom, whose candid and intelligent reports are

* “ The description of those cases of small-pox (if they can be called so) which occur in vaccinated subjects,” (*a*) an expression of Sir Gilbert Blane’s in his late able statement of facts, &c. clearly evincing, the question suggested has not yet been decided on by him.

(*a*) See *Medico Chirurgical Transactions*, vol. 10th, page 327.

highly satisfactory. They accord very generally in their testimony of small-pox appearing after vaccination, but in a small proportion to the number that enjoyed perfect immunity by means of its preventive influence, and furnish proof that even in that small proportion of such susceptible persons, the disease was so mitigated, as in general to cause a very slight degree of sickness during its shortened course, or apprehension of a protracted or unfavorable issue ; thus placing the great advantages of vaccination more firmly on the immoveable bases of experimental truth.

Several cases of eruptive disease after cow-pock, very similar to those published by Drs. Hennan* and Robinson,† and by Mr. Cross,‡ were submitted to my attention under circumstances which seem to me to confirm still more the justice of the foregoing views on this subject ; I however present a

B 2

* See Edinburgh Medical Journal, vol. 14.

† Cases of Eruptive Diseases, by Samuel Robinson, M. D. Physician to the House of Recovery, Cork-street, &c.

3 vol. of Transactions of the Association, &c. of the King and Queen's College of Physicians in Ireland.

‡ History of the Variolous Epidemic, &c. &c. by John Cross, Esq.

faithful narrative of them for subsequent discussion on the nature of such eruptions ; deeming that narrative chiefly interesting as tending to shew that a greater array of facts than have been yet collected is desireable. Very different opinions being expressed by several of my Medical friends, who at my request visited those cases, and whose judgment deserves the highest respect ; those who witnessed the early stages of the disease deeming it variolous, whilst those who saw the later appearances considered them equivocal or actually those of chicken-pock.

The Free School of St. Peter's parish, where (at the request of its excellent superintendant, Mr. Joseph Stringer of Aungier-street) I visited the following cases, has on its foundation forty female children, inmates of the house, and ten day-scholars, all of whom were certified on admission to have been inoculated either with small-pock or cow-pock matter, excepting Eliza Rhodes, on whom the inoculation of the latter, though three times repeated, neither caused areola or left a scar ; and Jane M'Leod, whom her father, a Scotch labourer, probably from superstitious feeling, would not allow to be inoculated

with either kind of matter. There is free communication between all those children in the school room, but between the boarders in the sleeping and dining apartments only, to which a central stair-case leads, and immediately beside this common passage there is a room where, from its being well ventilated and convenient for attendance, the following patients were placed in succession :

Eliza Rhodes, nine years of age, was on the 8th of January, 1821, attacked with fever, succeeded on the 10th with eruption of small-pox in the most confluent, malignant form, much swelling of face, much variolous fœtor, closed eyes, oppression of breathing, and croupy cough, which latter symptoms were most urgent on the 19th when I first visited, and they increased in severity till death, which took place on the 21st of January, the secondary fever having previously assumed the typhoid character. *

* Small-pox prevailed more in the course of the present winter in Dublin than I or many of my medical friends, whom I conversed with on the subject, ever recollect to have occurred, since vaccination was generally adopted here. It ap-

Maria Fitzgerald, 14 years of age, who had been previously vaccinated five years, and on whose arm, the scar as usually left after the areola was distinctly visible, on the 28th of January was attacked with fever; on the 30th the eruption appeared, with the characters of small-pox, according to the opinion of Mr. Stringer, who then witnessed it, and who had had much experience in that disease. February 1st, which was the first day of my visiting, pulse 100; tongue white; some headach; face somewhat swelled; complains of soreness of throat, which exhibits on inspection very little inflammation; skin hot, with numerous but distinct vesicles and pustules scattered over the face, trunk, and extremities, each vesicle and pustule having a damask rose coloured margin, and elevated to an apex, excepting five or six on the face, which are depressed in the centre, and these turning yellow, whilst all on the other parts seem still to contain lymph.* Fe-

pears also unusually malignant and fatal. And it is worthy of record that the common fever of the country has been also unusually malignant and fatal at the same period.

* Matter was taken from some of the pustules on the 2d of February, with intention of making trial of it in inoculation, but I was disappointed, not finding an opportunity of fulfilling those intentions.

bruary the 2d febrile symptoms much declined; pulse 80; pustules becoming generally yellow, with a greater number of depressions in their centres; the roseate colour of their bases is less vivid than on yesterday.

Dr. Robinson, author of the interesting paper lately published on this subject, examined this case, as well as the others to be given hereafter, along with me this day, and expressed his opinion that they were cases of modified small-pox, derived from the same origin, though differing considerably in their symptoms. February the 3d, very little fever remains; the maturation of pustules is now complete; the redness of their margins is still declining, except that surrounding a few on the bosom and arms. Surgeon Colles, who looked at the eruption along with me this day, considered its appearance very equivocal; however, on examining some of the pustules least desiccated on the bosom and arms, he said they preserved much variolous character. February the 4th, free from complaint; the incrustation of the pustules is variously coloured, on some yellow, on others brown. Dr. Fer-

guson, the learned secretary to the Cowpock Institution, whose wished-for visit I was unavoidably delayed in procuring before this day, did not consider the appearances then present to be variolous.

The incrustations remained attached for several days afterwards, and when they dropped off, left no pitting, save a very few minute depressions on the chin and neck, where the largest pustules had been.

Charlotte White, aged 9 years, was vaccinated when an infant, and has a well defined scar on the arm, such as is considered to designate security ; on the 28th of January she was attacked with fever, which continued till the 30th, when the eruption appeared. These particulars respecting this and the other cases of eruptive disease, which occurred previous to the 1st of February, were communicated to me by Mr. Stringer. February the 1st, the eruption is numerous but distinct on the face and neck, and is diffusely scattered on the trunk and extremities, vesicular containing lymph, pulse 120, very little febrile oppression or restlessness. February 2d, vesicles pearl coloured,

inclining to yellow, pulse 100, but feels no sickness ; some appetite, and desires to get up. February the 4th Incrustation of the pustules of the face has commenced, and on the two succeeding days extended to every part of the body ; the crusts soon afterwards fell off, and were of a yellow colour, leaving the skin underneath raised in the centre of the spot, as described by Dr. Robinson in the Report of the Cases published by him.

Mary Belian, 9 years of age, and Jane Carmady, 10 years of age, inmates of the house, both of whom preserved the marks on their arm of being properly vaccinated, had eruptions, stages, and symptoms slighter, indeed, than those in the foregoing case, but so similar that a detail of them would be equally tedious and unnecessary. “ *Ex uno disce omnes ;*” it is however proper to remark that the eruption was chiefly confined to the face in the case of Jane Carmady, who being greatly attached to Eliza Rhodes, who died of small-pox, was frequently observed leaning over her some days previous to her decease ; neither will it be deemed irrelevant to observe here, that Mrs.

Saul, the matron of the Institution, whose affectionate concern kept her continually about the deceased, and led her to administer the drinks and medicines with her own hand, (though she had the small-pox long before) was affected with a vesicular eruption on the face, unattended, however, by any sickness; the form of this eruption was very like that of the mildest of the foregoing cases.

In presenting these cases of Eruptive Disease after vaccination, to aid discussion on their nature, I must confess that my own opinion has often been very decided that similar cases which I witnessed but partially were to be considered instances of chicken or swine-pock, and not at all of a variolous nature; but on connecting the details of the whole of these cases in one view, I am no longer inclined to that opinion.

The two following cases of small-pox in persons, neither of whom had cow-pock previously or small-pox, were consequential on the exposure to the contagion which prevailed in St. Peter's parish-school, and appear to me to elucidate the nature of that contagion, and to be farther interesting from

the peculiarities of their course, and by exemplifying remarkably the well known wonderful power, which diseases have in mutually checking the course of each other.

It is necessary to premise that the subjects of the following cases, who are sisters, resided and slept together previous to and during the course of their several illnesses, that they, however, went to different day schools; the younger to St. Peter's parish-school, as already stated, the elder to Domville Avenue school, where the measles then appeared among the children, and where the latter contracted that disease, the eruption of which appeared on her at the same time that the eruption of the small-pox did on the former. In their present illnesses of the same diseases, that order is inverted.

Jane M'Leod, 10 years of age, a day scholar at St. Peter's parish-school, was attacked with symptoms of fever on the 29th of January, attended with head-ach, pain of back and stomach, succeeded on the 31st with an eruption on her face and bosom, which on the first day resembled measles, but on the second day of its appearance was

evidently small-pox. The pustules were numerous but distinct on the face and bosom, very thinly scattered over the other parts of the body, with very slight depression in their centres, and with an inflamed circular margin. Maturation took place on the 8th and 9th day, but the pustules were not in general so large, neither did they contain so much matter as is usual in small-pox; her sickness was so very trivial that she was up, and engaged in her usual occupations on the fourth day, requiring no medicine besides a gentle aperient.

The foregoing part of this case was communicated to me by Mr. Mulock of Charlemont-street, and the appearances which I witnessed were such as succeed small-pox, excepting a perceptible elevation in the centres of the spots recently occupied by the pustules, as described to have happened in the cases previously reported.

Mary Ann M'Leod, 12 years of age, who laboured under measles at the time of her sister's illness of small-pox, was on the 17th of February again attacked with symptoms of fever, head-ach, pain of back

and stomach, and on the 19th an eruption appeared on her face, neck, and bosom, extending diffusely over other parts of the body.

On the 21st, when I saw it, it was distinct and elevated, with an inflamed circular margin; pulse 120, with some febrile oppression, headach, sore throat, and slight swelling in the face. February 22d, the eruption was every where pustular, and seem to me to be decidedly small-pox. Surgeon Short who visited with me this day, fully concurs in that opinion; there was very little depression in the centre of the pustules, which were smaller than usual in variola; pulse 120; headach and sore throat less than yesterday. She is now up, and makes no complaint. The eruption still filling; many of the pustules fully distended with matter; fever declining. 24th, No report. 25th, Pustules very little changed since last report; no central depression in any of them. Dr. Osborne visited this day, and expressed a decided opinion that it was a case of small-pox. 26th, Incrustation going on rapidly, especially on the face; pulse 84. February 27th and 28th, the crusts, which are

general, are variously coloured; many shining and yellow, some brown, some of them have fallen off, and the parts underneath seem as if they would be pitted.

Previously to entering on some general observations which I propose making on these cases; I may remark that, notwithstanding very particular inquiries which I made, according to the suggestions of Dr. Jenner's late Circular Letter with respect to the state of the skin in those children at the time when they were vaccinated, I obtained no satisfactory answers on that subject. I therefore cannot even conjecture what proportion of these failures of protection from vaccination is attributable to the causes he has ascertained, sometimes to frustrate the means of prevention which otherwise would be effectual.*

* See Dr. Jenner's Circular Letter.

The following tabular view of these cases of Erythema Dissectum, may facilitate a comparison of their several stages, of fever, eruption, and decline, and also of the chief symptoms.

Name and Age.	Investigation or Vaccinated.	First day of Fever.	First day of Eruption.	Terms of decline of Eruption.	Comments.	General Observations.
L. Ellard, 10 years old.	Vaccinated with small effect.	10th of January.	10th of January.		Pruritus, with swelling of face, and eruption of face, and throat.	Unusual in the 10th day; eruption a short period was previously subsiding and fatal.
M. F. Agnew, aged 10 years.	Vaccinated 11 years before. A faint scar.	10th of January.	10th of January.	10, 4th, and 10th of February.	Lowest point of eruption, described by case in face, never remarkable.	Pruritus continued only after the eruption subsided. It was so that the eruption by the pruritus, elevated for some time after they declined, beginning afterwards.
C. White, aged 10 years.	Vaccinated 9 years before. A faint scar.	10th of January.	10th of January.	10, 4th, and 10th of February.	Eruption continued some pruritus, slight fever.	None, the case appeared a duplicate to that of Mary Fitzgerald.
M. Jones, 8 years old.	Vaccinated 11 years before.	10th of January.	10th of January.	10, 4th, and 10th of February.	No high fever or pruritus.	Do Do Do.
James Connolly, 10 years old.	Vaccinated 8 years before.	10th of January.	10th of January.	10, 4th, and 10th of February.	No pruritus.	Do Do Do.
James M. Leach, 10 years old.	Never vaccinated with either kind of matter.	10th of January.	10th of January.	10, 4th, and 10th of February.	Considerable pruritus, no high fever, but a pustular eruption, but did not erupt.	High, with irregular eruption, the eruption of the eruption.
Mary Ann McLeod.	Not vaccinated with either kind of matter.	10th of February.	10th of February.	10, 4th, and 10th of February.	Like those of her sister.	Pruritus rather larger than her sister's, but declined also more rapidly, and was larger.

N. R.—The second vertical human bears in this test many traits in common with the preceding columns of two nature, it appearing to me that Mary Fitzgerald, who was vaccinated at a later period than the rest, has the varioloid disease most acutely.

The first case of the M'Leods seems to me deserving of particular attention, because she and E. Rhodes, the only persons connected with St. Peter's parish-school, who were not protected by inoculation of any kind, were both affected with the variolous contagion which prevailed there ; and when its identity and that of her sister's with small pox, established by the opinion of several experienced practitioners, is connected in retrospect with the mildness of the attendant fever, the approximation of the form of the pustules to those in the modified cases, and the shortened course the sickness continued ; it seems more than probable that Jane M'Leod, the first who took ill, caught the infection from one of her school fellows affected with the modified form of variolous disease, and hence the mitigated course both in her's and her sister's cases.

On examining all these cases it will be seen, that the diagnosticks of chicken-pock given by Dr. Heberden, are totally absent, namely, " the vesicle full of serum on the top of the pock on the first day of eruption ; the early abrasion of these vesicles ; the shrivel-

led and wrinkled state of any which remain entire on the fourth or fifth day.”*

Neither did the vesicles appear in any of them, as Dr. Willan describes his diagnostics of chicken-pox ; “in succession during three or four days, different vesicles being at once in different stages of progress,” the † pustules in these cases appearing first on the face, then on the trunk and extremities ; and their filling maturation and incrustation succeeded in the same order. These processes were not completed before the eighth and ninth days of the eruption.

Still, however, this triple form (if it may be so called) of the varioloid disease, was so evidently modified through its whole course in the cases of the M'Leods, that a question naturally arises, if those two persons, or *those who might have received the infection from them*, shall be protected from the unaltered contagion of the genuine small-pox, or vice versa.‡

c

* See inquiry into the nature of small-pox, Medical and Political, &c. by Robert Walker, M. D.

† See Practical Synopsis of Cutaneous Diseases, &c. by Thomas Bateman, Esq. M. D. T. L. S.

‡ The mitigated form of small-pox in these two girls is the

A question, which appears to me to be one of great interest with respect to nosological classification, because if decided in the negative, the opinion of Dr. Morton, and most of the best medical writers before him, "that chicken-pock is the genuine small-pock, though of a milder kind," might still be tenable, notwithstanding the objection of Dr. Heberden, hitherto supposed valid :* "That these two distempers are totally different from one another, not only on account of their different appearances, but because those who have had the small-pox are capable of being infected with the chicken-pox, but are not capable of having it or the cow-pock again."

It is my intention, as soon as I gain permission from their parents, to inoculate Mary Anne and Jane M'Leod, one with variolus the other with vaccine matter, with a view to this interesting enquiry ; and until I can state the result of these experiments, I will not, by indulging in conjecture, (which seems to extend as I advance) farther enlarge this

more remarkable, as at that period the natural small-pox was generally severe, malignant and fatal, as previously noticed.

* Medical Transactions, vol. 3.

paper, which has already greatly exceeded the limits I had first proposed, neither would it be consistent with its design, which is simply to promote the collection of a greater number of facts on a subject of very deep and universal interest.

*"Trahit, quodcumque, potest, atque addit acervo
Quem seriat, laud ignota, ac non incerta, futuri."*

Since the foregoing statement was finished, I obtained permission, not without much difficulty, to inoculate the two M'Leods; and on the 28th of March, with the assistance of my friend Mr. Daniel, Lecturer on Anatomy, and Surgery at the Peter's-street Hospital, I inserted variolous matter,* very freely and abundantly into both arms of Jane, the first of the two sisters affected with the varioloid disease.

Mary Anne was inoculated at the same time, also in both arms, with vaccine matter

c 2

* The genuineness of the variolous matter employed might be fully relied on, having been taken and preserved by my friend Mr. Moore, sen. of Anne-street: "I send (says he, in a note which accompanied it) * some fine variolous infection on a lancet and glass / I took it, in July last, from a healthy child."

recently taken by the Secretary of the Cow-Pock Institution in Sackville-street.

It is to be observed, that on the day of their inoculation, the faces of both these girls had still many red stains on them, some of which were perceptibly elevated, more vivid however on the elder than on the younger ; a few very minute pits were also to be discovered, interspersed amongst those stains, and altogether presenting a very similar appearance to that which was witnessed in the cases of varioloid disease, which occurred in Saint Peter's Parish School.

Subsequently to these inoculations the state of health of these children, and of the incisions on their arms, was examined daily for eleven days, but no change of health could be observed in either of them, neither has there been any effect from the wounds, excepting on the third and fourth days, the margins were red and inflamed, not more however than would succeed the same wound, if inflicted with a clean lancet.*

* These experiments were repeated nine days ago, by my friend Mr. Rumley, of French-street, who at my request inserted vaccine lymph, recently taken, into both arms of each of those girls : as yet nothing more than slight inflammation is observable on the margins of the wounds; if there should be, or if any change

These experiments appear to me to be decisive, as far as their numbers can warrant, of the variolous nature of the eruptions which took place on the two sisters, and tend still farther to confirm the opinion of the other modified cases being also small-pox: besides, from the similarity of their stages, eruptions and consequences, it would seem that the former derived their origin from the contagion of the latter, as already noticed.

The protection afforded by this triply modified form against the infection of either variola or vaccine disease, appears to be another important result of these experiments, obviously pointing out another mode by which the blessings of vaccination may be indefinitely extended even to those, who from prejudice or doubt, delay to avail themselves of the ordinary and established mode of protection, by inoculation with the matter.

If the mode of protection thus suggested, should hereafter be established on more general observation, it might be advisable that, in all Institutions established for the promo-

in the constitution is observed before the printing of these sheets already commenced, is finished, such occurrences will be noticed towards the end.—April the 18th 1821.

tion of cow-pock inoculation, encouragement should be given to have all vaccinated persons affected with the contagion of small-pox brought thither, by which two very important objects might be attained. The excessive alarm which has latterly, in some degree, interfered to mar the hopes of the advocates for general vaccination would be counteracted, by exhibiting the mild form of the disease when appearing under such circumstances, as well as the small number of the vaccinated who would be found susceptible of even that form.*

On the other hand, should any unprotected person thus exposed catch this modified disease, the consequences might be expected to be the same from it and from vaccination, either as to protection from future exposure to the primary form of small-pox, or as to the degree of sickness produced.

With similar views it might also be advisable still to encourage vaccinated persons to employ the test of inoculation with the small-pox, and afterwards to exhibit the results of

* See Copy of the Report to the Secretary of State for the Home Department, from the National Vaccine Establishment, dated, 18th May 1820.

those trials, whether favourable or otherwise, at the public vaccine Institutions most convenient to their several residences.

I entertain no doubt that the evidence thus produced would be very favourable, and would effectually tend to remove the unmerited discredit, which unfortunately has been latterly attached to vaccination, since the appearance, in some instances, of certain forms of small-pox after that accredited preventive had been employed.

The well established fact, that many persons have been at times insusceptible to the effects of full exposure to the contagion or infection of variola or the vaccine disease, who subsequently were affected with either of them, affords, I think, another argument for using those precautionary measures; whether such temporary susceptibility may be supposed to arise from Idiosyncrasy in the individuals themselves, or that the epidemic prevalence of contagious diseases is, at some times, from causes not well ascertained, more influential on the human constitution than at other times.

In offering the foregoing suggestions for public consideration I trust I shall not be

ranked amongst those who would willingly oppose that philanthropic ardour, which aspires to the extirpation of small-pox from amongst mankind, by means of simultaneous and universal vaccination; for I believe none more than myself feel reluctant in giving up that splendid hope: additional circumstances, however, reported by the advocates as well as by the opponents of the measure, are daily presenting themselves, which should lead us, I apprehend, to distrust the accomplishment of so grand an object by human means, within any time at present limitable.

The last reports from the Vaccine Institutions, both in London and Dublin, afford indeed new and highly satisfactory evidence with respect to the general efficacy of vaccination, as well as the continued confidence of medical practitioners and of the public in that practice; and I transcribe, with sincere gratification, the following extracts from the copy of the Report to the Secretary of State for the Home Department, from the National Vaccine Establishment, dated, 18th May 1820.

“Lymph has also been occasionally re-

“quested from the Continent of Europe, and
 “charges were lately transmitted to Ham-
 “burgh and Hanover.

“Our correspondents in Great Britain
 “and Ireland have reported to this Board,
 “that the number of persons vaccinated by
 “them, during the year 1819, amounts to
 “79,940; forming, with the number vac-
 “cinated in London and its vicinity, a total
 “of 83,897 persons in one year; yet many
 “send no returns, or the number would be
 “considerably greater.

“From these facts the Board think them-
 “selves entitled to conclude, that the practice
 “of vaccination in His Majesty's dominions
 “continues to advance, and therefore, that
 “the confidence of medical practitioners,
 “and the confidence of the public in that
 “practice remain unshaken, notwithstand-
 “ing, many unfavourable occurrences, with
 “which it will be our duty to acquaint your
 “Lordship.

“The Reports transmitted to this Board,
 “likewise warrant the conclusion, that
 “wherever small-pox inoculation is aban-
 “doned, and vaccination exclusively favour-
 “ed or commanded the most, illustrations

“ of the Jennerian discovery are uniformly
 “ afforded ; for in addition to these places
 “ mentioned in our former reports, in which
 “ small-pox is now unknown, the Board
 “ have received information, that no case of
 “ that disease has occurred since the year
 “ 1814 at Shattisham in Norfolk ; nor since
 “ the year 1817 in the city of Gloucester.
 “ The boroughs of Clonmell and Newton-
 “ Limavady in Ireland, and Mothvey in
 “ Carmarthenshire, with the whole county
 “ for twenty miles around it, are reported to
 “ have completely succeeded in the extirpa-
 “ tion of small-pox ; and in the island of
 “ Guernsey, only one solitary case of that
 “ fatal distemper is known to have occurred
 “ during the last year.

“ The career of vaccination appears,
 “ however, to have been less brilliant in its
 “ native country than in some parts of the
 “ Continent of Europe, where the practice
 “ of it is enforced by legal enactments, and
 “ inoculation for small-pox is prohibited by
 “ severe penalties. Under such regulations,
 “ it is affirmed, that the small-pox has ceased
 “ to exist in Denmark for the last eight
 “ years ; and that the knowledge of this

“ fact has now induced his Danish Majesty
 “ to proclaim the same decrees in the West
 “ India Colonies.”

But gratifying as these statements are, and though highly favourable in proof of the inestimable value of the Jennerian discovery, do they, or any other facts yet promulgated, justify so serious an inroad on the British Constitution, and the liberty which all men enjoy most in the bosom of their families, *as the penal enactments thus contemplated would be?* or have we sufficient data to promise, with even an approximation to certainty, that the adoption of such a coercive regulation would be obeyed in the British dominions, or succeeded by similar consequences, as in countries differing so much from them in all their geographical, political, and moral relations?

The following is also an extract from the same Report :

“ The Board are also informed, by a most
 “ interesting communication from Dr. De
 “ Caro of Vienna, that similar decrees have
 “ been published in the Austrian dominions,
 “ and that small-pox is now confined to that
 “ portion of the poor who, by concealment,

“ contrive to evade the Imperial Ordinances.
 “ He announces that since the year 1799,
 “ when he gave the first example to the Con-
 “ tinent of Europe, by vaccinating his two
 “ elder sons, he has never seen a single case
 “ to weaken his confidence in the efficacy of
 “ that practice.

“ An important letter, together with a treatise on this subject, has also been transmitted
 “ to the Board from Dr. Krauss, an intelligent
 “ physician, who is charged with the superintendence of vaccination in the circle of Royal
 “ in Bavaria ; he affirms that, in that Circle,
 “ containing half a million of people, small-pox has never occurred since the year 1817.

“ If these facts be correctly reported to us,
 “ they would appear to afford convincing
 “ proof that the extinction of small-pox is
 “ entirely within our own power.

“ The testimonies of some of our correspondents in this country are by no means so
 “ favourable. They concur in showing that
 “ great numbers of persons who had been
 “ vaccinated, have been subsequently seized
 “ with a disease presenting all the essential
 “ characters of small-pox ; but that in the
 “ great majority of such cases the disease has

“ been of comparatively short duration, unat-
 “ tended by symptoms of danger. In several
 “ of these cases, however, the malady has been
 “ prolonged to its ordinary period, and in
 “ eight reported cases it has proved fatal.”*

It therefore appears from these statements, as well as from the Reports for the last five years of the state of vaccination in England, where it first had its rise, that it has not been universally adopted even there. But though it should, as I hope it may soon be, and in all parts of the United Kingdom, yet if it be not also ~~so~~ universally employed by all the nations of the earth, with which this greatest of commercial countries holds constant intercourse, and if also all the fomites of small-pox were not effectually destroyed, the extirpation would be only temporary, and the scions from its latent roots might soon be apprehended again to exhibit their irresistible growth and noxious influence.

It may not be deemed misplaced to recur briefly here to the remarkable circumstances which happened to Mrs. Saul, the house-keeper of St. Peter's Parish Free School, as

* See Report to the Secretary of State, &c.

exhibiting an instance of small-pox contagion of peculiar activity, producing a modified eruption of that disease on a person who not only had undergone the small-pox in her infancy, but had besides been exposed subsequently many times to its contagion without effect. I have since learned also from her, that two young children of her own, who had been vaccinated, and who slept near her in her bed-room, both experienced slight sickness at the same time that she was affected with the eruption, and that this sickness was followed by an eruption which first looked like that on their mother, but did not rise into vesicles.

In the Reports of the Fever Hospital and House of Recovery, Cork-street, I have noted the remarkable circumstances similar to these, that in some seasons when measles prevailed, even the cases of those who had previously laboured under that disease sometimes exhibited eruptions resembling those which characterise it; and also when scarlatina prevailed, those of the family who previously had that disease were often found affected with sore throat, with more than

usual tendency to evanescent redness on the surface.*

Such facts as these appear to me to deserve particular attention in discussions like the present, and should tend to allay the alarm excited by the cases of small-pox, which are reported to have appeared after vaccination, because such facts shew that something very similar occurs, with respect to the preventive power not only of small-pox itself, but also of some other of the Exanthemata; which, however, with perhaps an equal number of exceptions, give protection from future attacks of similar forms of disease.

I may here also mention, that I think it probable that petechial fever is affected by similar laws, in these respects, with the Exanthemata; and I believe, from much observation, that these fixed laws are as seldom deviated from in the former as in the latter diseases.

How the various forms of contagious

* See the joint Reports of the Physicians of the Fever Hospital and House of Recovery, Cork-street, for the year 1806, and that by me separately, for the year 1807.

diseases have originated, whether always inherent or spontaneously produced ; and why some of them, once prevalent, have totally disappeared ? are questions surrounded with extreme obscurity, and are, as well as the facts just now related, obviously connected with the subject of extirpation of the small-pox ; they would also, I am persuaded, require to be better known, or the laws which govern these phenomena more fully ascertained than they are at present, to enable us to speculate with any approximation to certainty with respect to the success of regulations which would be founded on mere reasoning. Perhaps, in the present instance at least, the political Economist would be more likely to be successful by observing the advice of the most experienced and candid medical writers, to follow nature, and assist to remove the obstructions to her efforts, providentially bestowed by her all-wise Author, for resisting evils, than by attempting at once to arrest her course, by regulations founded on an imagined theory, whose light might prove as fallacious as it now appears brilliant and attractive.

Recurring to the experiments which led

to these general observations, I own, notwithstanding the protection afforded by the modified form of small-pox in these two instances, I still hold the opinion, that similarly ingrafted diseases do generally, by repeated transfer, produce varieties differing as they recede, more and more both in qualities and semblances, from those of the original parts of the parent stock.*

This hypothesis is founded in analogies, which might be readily supplied from the histories of hereditary diseases, as well as of the changes of form and colour, which are

D

* The following opinions are entertained by many most respectable medical practitioners of extensive experience in inoculation. That matter taken directly from the natural small-pox, *ceteris paribus*, produces a more severe disease than when the matter employed had been taken from pustules produced by inoculation: and that generally the more frequent the transfer by inoculation had been, by so much the more mild the disease may be expected to appear.

Opinions which appear to me to be intimately connected with this discussion, and I believe are well founded; for notwithstanding a very limited experience in small-pox inoculation, two fatal cases from it came under my notice, shortly after I commenced the practice of medicine. In both of these cases the matter was directly transferred over the intervening distance of near a mile from the pustules of the confluent form of small-pox and inserted on the arm. I have heard of similar occurrences from some of my medical acquaintance.

successively effected by such transfer in the productions of both the accidental and artificial unions of varieties in the animal and vegetable kingdoms.

By admitting that the same may happen with respect to the varioloid disease, itself the joint production of small-pox and the vaccine disease, we shall be able to explain many circumstances connected with it, and the various forms which it is stated to assume ; as well as to reconcile ourselves with many facts lately published, which would otherwise appear incompatible with each other.

The facts I allude to, are these : Inoculation with the matter taken from the pustules of the modified small pox, have been found to produce a vesicular disease in unprotected persons, unattended by any of the characteristics which it exhibited in the case from which it had been taken ; and that vesicular disease has not been found to leave protection from the contagion of the natural small-pox or from vaccine infection.*

Such facts prove that, as the varioloid

* See Correspondence of the Directors of the Cow-Pock Institution, &c. Sackville-street, Dublin.—Published in the year 1818.

disease ultimately changes its form from that of either diseases in which it originated ; in the same degree it loses the quality of giving protection from them, or from any other forms of disease, besides those similar to that it had assumed.

By such processes of nature perhaps, the varieties of swine-pock, chicken-pock, water-pock, and horn-pock, have diverged from the small-pox, the common centre from whence they sprung.

The account of several cases of secondary small-pox, which have recently occurred in the Military Hospitals of Edinburgh Castle, which is published in the last Edinburgh Medical and Surgical Journal, establish the justice of these views beyond controversy ; and it is gratifying to me, that the reasoning, which, before I had the satisfaction of seeing that statement, rested chiefly on opinion, has had its justness already thus confirmed by facts.*

The following interesting cases of the vari.

D 2

* See Edinburgh Medical and Surgical Journal, vol. 17th, No. 70, being the 1st number of the new Series, dated April the 1st, 1821, page 190.

oloid disease and observations on them have, through the kindness of several of my much esteemed medical friends, been communicated to me in consequence of conversations I had with them on the subject, since the foregoing part of this treatise was written.

As records of facts reported on unquestionable authority, and illustrative of the views of this publication, those communications appear to me to be highly valuable, affording instances of such forms of the varioloid disease at different periods, and giving the opinions of those, whose judgment was least likely to be in error, with respect to their nature and origin.

There is another circumstance respecting these communications that deserves to be remarked; that such forms of disease must have been, until latterly, extremely rare, since many observers of the most extensive practice witnessed them so seldom, as to appear to them uncommon deviations from the ordinary course, which they had hitherto noticed.

The first of these communications (placed in the order of the dates of the events they detail) is not only valuable and interesting,

for the foregoing reasons, but also because it appears to exhibit a remarkable instance of experiments, which, notwithstanding that they were instituted and conducted with that ability and care, by which their Author has already so considerably extended the bounds of medical knowledge: yet, from being viewed with too much regard for received opinions, they seemed to warrant conclusions which otherwise, perhaps, might have been different.

All the appearances which he observed in the course of the disease, were such as he considered to be the product of small-pox contagion, but modified; and the vesicular form which the eruption assumed in the cases to which he transferred the matter of the modified form, alone led to a contrary opinion.

FIRST COMMUNICATION.

From Richard Carmichael, Esq.

DEAR SIR,

THE following are the circumstances attending a disease, which I candidly acknowledge I believed to be small-pox, until the experiment of a subsequent inoculation with the matter of the pustules induced me to imagine that this opinion might have been erroneous.

On the 9th of December 1817, I was called on to see Miss M. N. ætat. 11, on account of an eruption over her face and body, which possessed all the characters of small-pox. It was the 4th or 5th day of the eruption. At the time I was a good deal startled by the occurrence, as I had inocu-

lated the child ten years before with cow-pock, and recollected that she went regularly through that disease, as was indeed sufficiently obvious by the presence of the usual marks caused by the cicatrices. The present eruption, I learned, was preceded by a smart fever, ushered in by chilliness, and succeeded by burning heat, headach, and efflorescence of the skin.

On the 10th and 11th the spots continued to fill, particularly those on her face and thighs; her face became much swollen, and her eye lids closed.

On the 12th the spots on her face, which were as large and as fully matured as those of small-pox, began to decline, and continued daily to do so, forming crusts exactly resembling those of that disease.

On the 13th she was visited, at my request, by Doctor Jackson, as also by Doctors Clarke, Ivory, and Labatt, Directors of the Vaccine Institution.

All these gentlemen, of well-known experience, and intimately acquainted with the characters of Variola, Vaccina, and Vari-cella, seemed as much perplexed as myself,

and, as far as I could collect, were undecided as to the nature of the disease in question; and although I am unwilling to state the opinions of others without being fully authorized to do so, this much I think I may safely aver, that if the child had not been affected with cow-pock, or if cow-pock had never been known, they, as well as myself, would have had no hesitation in pronouncing the disease to have been small-pox, so accurately did its characters correspond to those of that malady.

In order to clear up, if possible, this uncertainty, I determined to ascertain the point by experiment, and therefore on the 16th December inoculated four children belonging to the Female Asylum of the House of Industry with matter taken on the 14th from the pustules of our patient. Two of these children, as I was informed by Mr. Beatty, apothecary to the Institution, had never been affected with variola or vaccina, but the other two had gone through the former disease.

Only one out of the four took the infection, so as to affect the constitution; and this individual was one of those who it was stated had gone through small-pox. This

girl's arm, where the infection had been inserted, began to inflame in about eight days, and afterwards formed a small vesicle, which finally became a pustule.

On the 5th, 6th, and 7th of January, numerous spots (without being preceded by any perceptible fever) made their appearance on her face and body, which never filled like those on the young lady from whom the infection was taken, or at all resembled those of small-pox. On the contrary they were more vesicular than pustular, and evidently of the varicellous character. In four or five days these spots all dried up and rapidly disappeared.

In two of the other children, the inoculated spots began to inflame in six or eight days after inoculation, but neither developed vesicle or pustule; on the contrary, they gradually declined and disappeared in two or three days without being succeeded by any constitutional eruption. The fourth child was not at all infected by the inoculation.

I have now detailed, without comment, the facts connected with this case. I know not whether they support your opinions; but I

trust they will be of some little service in developing the truth, which I know is at all times the main object of your professional enquiries.

Believe me to be,

Dear Sir,

Your's faithfully,

R. CARMICHAEL.

Rutland-square,

April 14, 1821.

To Dr. Stoker, York-street.

SECOND COMMUNICATION.

From Alexander Jackson, Esq. M. D.

Gardiner's place, April 11, 1821.

MY DEAR DOCTOR,

AT the last meeting of our Society, the Medical and Philosophical Society, you communicated a paper, which excited a good deal of interest: and I incidentally observed, that a case had occurred to me which would throw some light on the tenor and conclusions of your observations. If that case coincides with your views, it is quite at your service, and you may make it your own in any way you please.

A lady in this city had her confidence in Vaccination shaken by some cases of alleged small-pox, which occurred in a parish-school, in the conduct and management of which she has long taken a lively interest. These children had been previously vacci-

nated. This lady was about to place her two sons at a public school. They had been vaccinated in India. The mother's fears had now gained such an ascendant, that she was determined to have them inoculated with the small-pox infection, as the only test to remove her apprehensions. Mr. Meredith, of North Earl-street, a most respectable apothecary, procured infection, and the boys were inoculated. The elder boy had, from nature, a good constitution; the younger was delicate. On the eighth day after inoculation the younger boy was attacked with the usual symptoms of fever, attended with violent vomitings. My attendance was now required. On the third day an eruption of small red spots appeared on the face, and successively on the inferior parts of the body. These spots, for two days, were gradually rising into pimples; they now became less eminent, and in three days were not palpable. The usual process of the disorder was arrested, and in the course of one week from the time of the eruption, there was not the least discolouration of the skin remaining.

The general health of this boy was soon

re-established, and continued rather better than before the experiment of inoculation. The elder boy had no symptom of fever, though the insertion of infection produced considerable local inflammation. This is a concise statement of facts.

The subject of infection and contagion is involved in great mystery; and I believe, all the human mind can do is to watch and record the phenomena of morbid actions. The fundamental laws of life are inscrutable, and are beyond the reach of human investigation. The property of a specific contagion is to render the body unsusceptible of its action ever afterwards. The protection which vaccination affords is not only against the recurrence of its own action, *but also* against the infection or contagion of small-pox, whether casual or inoculated. This difference from other specific infection or contagion would induce me to suppose, from analogical reasoning, there is some great similarity, if not identity, in the nature of small-pox and cow-pox. The specific contagion of measles fortifies the constitution against the recurrence of the same disorder, but has no influence in protecting it from the infection or

contagion of small-pox. The vaccine infection protects, I verily believe, the human frame in a great proportion of cases from the contagion or infection of small-pox ; and therefore, I conclude, with a strong degree of analogical certainty, that there is an identity or essential similarity in the nature of these diseases. This inference appears to me irrefragable.

In the case which I have now related, the infection of small-pox excited or produced the incipient train or concatenation of morbid actions which constitute the symptoms of small-pox ; and the process or series of diseased action was stopped or dissevered by some inscrutable condition of the body, induced by previous vaccination.

Vaccination renders the body unsusceptible of the contagion or infection of small-pox. Is the converse of this proposition true ? A great accession has been made in our days to the history of infection, and the destinies of the human race are likely to be more affected by the introduction of vaccine infection, than any other medical discovery that ever was made. This specific contagion is derived from the cow. It has been alleged

by some medical writers, that all specific contagions have been originally derived from brute animals; and the wonderful analogy between cow-pox and small-pox would lead to the adoption of that inference, This view of the nature of infection opens a large field for future research; and I can anticipate the happiest results from that investigation.

Sincerely wishing you every success in all your laudable exertions,

I remain,

My dear Stoker,

Your's very faithfully,

A. JACKSON.

To Dr. Stoker, York-street.

The following paper was printed in the Third Volume of the Transactions of the Association of the King's and Queen's College of Physicians in Ireland, but I gladly avail myself of the Author's permission to republish it, with some additions since made by him. W. S.

THIRD COMMUNICATION.

From Samuel Robinson, Esq. M. D.

Read, before the Association of the Fellows and Licentiates of the College of Physicians of Dublin, on the 6th September 1819.

TWO instances of eruptive disease after cow-pock, have lately occurred to me, which I beg leave to communicate. They happened in such immediate connexion with

two cases of *genuine* small-pox, as seems to determine the variolous nature of this “modified eruption,” and to exemplify very clearly a power in vaccination to alter the effect of the contagion of small-pox—where it suffers that agent to exert its force on the constitution—so materially as to render the consequent disease almost, if not altogether, a new one of mild character.

The instances, that I wish to bring under your notice, were similar to the cases, which have been so well described by Dr. Hennen, in the 59th Volume of the *Edinburgh Medical Journal*. I cannot forbear acknowledging here, how much we are indebted to that gentleman for the intelligence and candour, with which he has detailed those cases, and opened the way, as I conceive, to a more correct opinion on the subject, to which they refer, than had been generally entertained, and to the establishment of our confidence in the *vaccine security*. I wish, however, to see the question still kept open for discussion, and brought to the test of further experience ; nor do I feel any objection that even Mr. Brown of Musselburgh—the strenuous impugner of “the

Jennerian discovery"—should continue on the field of controversy ; though I think that overcharged vehemence, asperity, and dogmatism, are but little suited with medical enquiries.

It may be proper to mention the situation, where I had an opportunity of observing those cases, it being favourable for ascertaining the effects of the variolous contagion on constitutions differently circumstanced. A number of children—several of them having undergone the cow-pock—a few the inoculated small-pox—some having had the natural small-pox—while *two* never had either form of that disease, nor the cow-pock—were at the time inmates of a charitable institution for the reception of female orphans, which is conducted in a range of apartments on the same floor over the Bethesda Episcopal Chapel in this city. The apartment, into which you enter from the landing place of the stairs, being the school-room, occupies one extremity of the story, within it is the sleeping-room, and beyond the latter are two small apartments, one of them used occasionally as a sort of family hospital, separated from each other by a

short passage, upon which the door of each opens, leading from the sleeping-room to the committee-room and kitchen, which together occupy the other extremity of the story.

S. Garrett, *who had not been vaccinated, nor suffered the inoculated or natural small-pox*, on the 16th of July was attacked with fever. On the 18th, an eruption appeared, which in its course exhibited the characters and observed the regular stages of variola; the pustules were very numerous and confluent, the face was greatly swelled, and the eyes were closed for some days. On the 28th, Incrustation commenced, when the fever subsided. This patient was pitted in various parts of the body.

E. Connor, *who had been vaccinated*, on the 3d of August was attacked with fever. 4th, Fever continued. 5th, Eruption appeared. 6th, Febrile symptoms subsiding. 7th, Eruption vesicular, not numerous, distinct, and containing lymph. Pulse natural. 8th, Vesicles of a pearl colour, some changing to yellow. 9th, Incrustation commenced. 10th, Pustules rapidly drying on the face, some remain on the limbs; convalescent and walking about. 11th, some pustules still on

the feet. 12th, Incrustation extended to all the pustules. 13th, Crusts of a yellow colour ; where they have fallen off, the skin appears irregularly *raised* in the centre of the spot, which they had covered.

M. Montgomery, *who had been vaccinated*, on the 5th of August was attacked with fever ; in the evening an eruption similar to that on Connor appeared. 6th, Vesicles forming, not numerous, distinct, and containing lymph. Fever continues, but is not oppressive. 7th, Fever more excited. 8th, Vesicles of a pearl colour. Fever subsided. 9th, Pretty much as yesterday. 10th, As yesterday. 11th, Vesicles changed to yellow, Incrustation commenced. 12th, Some pustules remain on face and arms. 13th, Some of the crusts are yellow, some brownish, shining, and of a horny appearance about a line in diameter.

M. Bartley, *who had not been vaccinated, nor suffered either the inoculated or natural small-pox*, on the 6th of August was attacked with fever. 7th, Fever increased ; complains very much of her head. 8th, Fever greatly excited ; considerable delirium. 9th, Eruption appeared on the face and

limbs. The state of fever nearly as yesterday. 10th, Eruption vesicular, very numerous, and confluent ; febrile symptoms less severe ; no delirium. 11th, Vesicles of a pearl colour, not much raised, containing lymph, of a *larger* size than those in Connor's or Montgomery's case. Fever as yesterday. Vesicles generally depressed in the centre. 13th, Pretty much as yesterday. 14th, Vesicles on the face becoming yellow ; central depression still observable. Face and hands swelled ; eyes nearly closed ; pulse 128. Thirst. No appetite. 15th, Vesicles on face more yellow, and rather fuller ; on the arms also they are becoming yellow ; on the lower extremities a little changed in colour ; still depressed in the centre. Pulse 128. Thirst continues. A little appetite. 16th, Pustules on face, which are well filled, have become itchy, some rubbed off. Pulse 128. Thirst less. Appetite improved. 17th, Pustules over the whole body are well filled, and no longer depressed in the centre. Pulse 108. Tongue clean. No thirst. Appetite increased. 18th, Pustules much distended with matter. Pulse of natural frequency. 19th, Was not visited. 20th, Pustules on

the arms have burst. Incrustation commenced. Convalescent.

Those patients were visited by Dr. Joseph Clarke, Dr. Labatt, Surgeon Johnston, and Mr. Kennedy, who agreed in the opinion that Connor's, Montgomery's, and Bartley's cases were produced by the variolous contagion, which was derived from Garrett. The distinctions, however, between the *two species* of disease, into which those cases naturally divide themselves, are remarkable—the great mildness of the one compared with the other. In Connor and Montgomery the fever was only of three days duration, in Garrett and Bartley it was of thirteen—in the two former persons Incrustation commenced on the seventh day from the first attack, in the two latter not till about the fourteenth : the two former are not pitted, the two latter are much pitted.

Although convinced, from the limits and arrangement of the school, that every child in it was fully exposed to the contagion, which exhaled from Garrett during her complaint, yet in order to try the susceptibility of the children, who remained in health, by a still severer test, on the 15th of

August, assisted by Mr. Kennedy, I inoculated, with matter taken from Bartley, and immediately inserted at her bed side, thirty children of the school, of whom eighteen had * many years before been vaccinated, nine had the natural small-pox, and three the inoculated small-pox. The result was alike in all. No eruptive disease produced; no affection either constitutional or local, except a small sore with some degree of inflammation on the punctured part, which occasioned very little trouble and disappeared in a few days. This experiment is decisive in favour of vaccination.

I wish to put these facts on record, as coinciding with the important facts already alluded to, furnished by Dr. Hennen, which together may be expressed under a general form in the following conclusions:—

1. That an eruptive disease is produced by the small-pox contagion, on the persons of *some* of those, who had undergone the vaccine affection.

2. That this eruption has in a certain degree the form, and affects the course and

* The periods vary from six to sixteen years.

changes of variola, though of shorter duration ; but has not hitherto proved dangerous to human life, and may be considered a new and mild species of variola.*

3. That vaccination, as far as our experience has yet gone, appears to be fully capable of preventing the *fatal effects* of small pox, and of ultimately banishing that formidable and loathsome disease from among mankind.

S. ROBINSON, M. D.

Eccles-street,
August 23, 1819.

* Dr. Clarke calls it a *Hybrid*.

The following very remarkable cases of eruptive disease were communicated since the printing of this treatise was nearly completed, by a much respected medical friend, under whose immediate observation they occurred.

The accuracy of his report may be relied on, though from some private reasons of his own I have to regret that the Author does not allow me to put his name to it which otherwise, as in the other communications which I have been favoured with, would itself secure its authority from any doubt.

The date of the events related connect them with those detailed in the former part of this treatise.

W. S.

FOURTH COMMUNICATION.

Mrs. ———, æt. 27, was delivered in November last of a boy, her third child.

On the 3d day after delivery an eruption appeared similar to miliary, very general, and attended with considerable fever and depression. About the 5th day it began to assume a vesicular appearance, larger than usual in miliary eruption;—and on the 7th or 8th day, large vesicles were formed, confluent in some places. From the 9th to the 14th day they still further encreased in size; were attended throughout with much fever and debility. After the 14th they began to desiccate and form scabs, which were not ultimately thrown off for a very considerable time, and have left *very* strong pits behind them similar to small-pox.

This lady, when very young, had the small-pox in the natural form, which also left pits strongly marked, which are distinguishable from the recent ones by the latter being purple when she is exposed to cold. It is here worthy of remark, that after her first lying-in she had a similar disease; the vesicles however, in this instance, did not leave behind them any marks or pits.

In the advanced stage of this last complaint, say about the 9th or 10th day, it struck

her medical attendants with the idea of perfect small-pox, the eyelids being completely closed by tumefaction and she had great difficulty of breathing through the nostrils, which were swelled by the external and internal vesicles, which had assumed a dense opake pearl colour, but which, in *no instance* during any period of their existence, on being punctured, afforded any pus, but a glaring transparent fluid.

Since the disease her sight has become weak, the fauces sore, the throat liable to inflame on the slightest cause, and her teeth decay.

About the 15th or 16th day after birth, or on the commencement of the mother's convalescence, the infant, who had previously been healthy, and not inoculated, nor exposed in any way out of the mother's room to infection, was seized with a strikingly similar eruption to that of the mother, which became so numerous and confluent as not to leave a spot on the entire body uncovered. On the 5th day the resemblance to small-pox was most striking, eyes completely shut up—the fauces, mouth and nose being lined with vesicles, so as to cause difficult swallow.

ing, with the peculiar hoarseness; also the peculiar fœtor of small-pox was evidently present in this case. The child died on the 7th day—apparently from general irritation and want of sufficient nourishment, from the difficulty of swallowing.

On the nates, back and shoulder particularly, were remarked dark purple spots in the centre of vesicles. At no period was pus discovered on puncturing these vesicles.

N. B. This child was nursed or suckled by the mother, and the milk remained undiminished and of apparent good quality during the whole of the period.

A strong doubt, as to the absolute and decided nature of this complaint, remained on the minds of the medical attendants.

ADDENDA.

The pustules, in the mother's case, were in some parts very elevated, and had the rounded appearance of hemispheres. They sometimes spontaneously broke, and a crust antecedent to scabbing was formed.

The washerwoman's child was afterwards, in three or four days after the linen being brought home, seized with a supposed similar disorder, but which was not seen, and died, not having been before inoculated. There was another peculiarity; fresh crops of vesicles having successively appeared, during the mother's disease.

FIFTH COMMUNICATION.

From John O'Brien, Esq. M. D.

Kildare-street, April 3.

DEAR SIR,

IN compliance with your wish to have the particulars of the case of Catherine Fay, who appeared to me to labour under the varioloid eruption, similarly to the cases you have described, I beg to send you the short detail of her case.*

Catherine Fay, æt. 19, was admitted into Cork-street Hospital on the 6th of March 1821. On the subsequent morning's visit the following appearances presented themselves: a deep red colour on the back of her hands and forearms, extending half way up the humerus. There was an evident pro-

* This patient was removed, when her sickness commenced, to the Fever Hospital from her residence in Camden-street, immediately contiguous to St. Peter's Parish School. Her master keeps a public shop for the sale of meat.

minence of the papillæ of the skin over the red surface, the projections being very perceptible to the touch. The legs and feet were affected nearly in the same manner; her eyes were heavy and muddy red; red spots were visible on different parts of the face, with a kind of apex in their centre, and similar spots were also thickly scattered over the chest and shoulders.

As to her other symptoms, they were such as generally characterize confluent small-pox, viz. nausea, pain in back, &c. She stated, however, that the redness, &c. appeared on the 2d day after her first attack; and though inclined to consider it a case of natural small-pox, this circumstance inducing some doubt, I shewed her on this day to my friends Drs. Hagan and Grattan, who agreed that there was something anomalous in the symptoms. She stated, that she was not conscious of having been exposed to the contagion of small-pox in any manner, and did not know whether she ever had been inoculated. On enquiring, however, of her mother, I was informed that she had been inoculated 15 years ago in the country, by an itinerant inoculator; but she could not

tell whether with cow-pock or the natural small-pox. The distinct marks appear on her left arm.

On this day, the 7th, she was ordered merely a laxative draught of castor oil, and her face and body were directed to be sponged with tepid water and vinegar.

On the 8th, I was agreeably surprised by the rapid restoration of my patient from an oppressive load of sickness to almost perfect health. She now declared her sickness and pains were gone, and begged for food. This change to rapid convalescence was attended by the subsidence and disappearance of the red eruption on the skin, before described, which was succeeded by red elevated papillæ on the face, the arms and legs, as well as the neck and shoulders. They were more numerous on the face, arms and legs, than elsewhere, but quite distinct. Many small pustules were visible on the lips and cheeks this day.

On the 9th, all the small papillæ were converted into vesicles, filled with lymph, which were matured on the 11th; and thence forward, the pustules successively dried up into small hard crustaceous eminences,

until the whole disappeared. The patient enjoying her usual health, she was dismissed the Hospital on the 16th.

The distinctive marks which were the most striking between this eruption and variola were, first its more rapid progress and termination. 2dly, The size of the pustules, which were less than I have ever seen them in the distinct small-pox; their bases appeared neither red nor elevated, and were not unlike the small circular boils which sometimes appear on the hands in psora. 3dly, The total absence of secondary fever.

The ignorance of the patient's mother with what species of matter she was inoculated, renders the case imperfect and difficult, but not a little curious, whichever supposition we adopt. I do not think that vaccine inoculation was generally practised 15 years ago in this kingdom, particularly in the country parts; yet one circumstance, which her mother stated, induced me to think that she was vaccinated, namely, that the inoculation was followed by no eruption.

Yours, &c.

J. O'BRIEN.

CONCLUSION.

A retrospective summary will form a necessary conclusion to this little publication, in order to shew the connexion between its different parts, which might otherwise, perhaps, appear totally heterogeneous.

The first part details cases of new forms of eruptive diseases, which affected persons who had been previously vaccinated, but under circumstances which tended to remove every remaining doubt of the variolous nature of such eruptions: they however exhibited also new proofs of the antidotal efficacy of vaccination, equivalent almost to that of small-pox itself, under the same circumstances.

These cases too, as well as the others of the persons not protected by either kind of inoculation, who seemed to have been affected by a modified contagion, indicated new views with respect to the origin of many of the vesicular diseases, or rather tended to restore the old opinions of such diseases having derived their origin from small-pox.

They also afforded suggestions with respect to the most effectual means of ascertaining a true estimate of the value of vaccination,—of re-establishing public confidence,—and of thus illimitably extending its benefits.

Of the general importance of the latter part, which contain, the valuable communications with which I was favoured, I deem it better, “*silere quam pauca dicere*,” as they all bear unquestionable evidence of their high authority. A few general observations only may be admissible here, with respect to the connexion of the subject of each part.

The communications bear general reference to cases of anomalous eruptive diseases resembling small pox, apparently altered, by some modifying cause or state, which previously existed in the constitutions of those affected : in some the antidote was vaccination, in others inoculation with the small-pox.

It appears also that, although some of these anomalous eruptions were observed at periods antecedent to that in which the cases detailed in the former part occurred ; yet by far the greatest number of them bear a later date, corresponding with the period at which

the small-pox raged amongst the unprotected, with unusual malignity, and exhibiting another analogy between it and the varioloid disease, both forms having affected the same epidemic tendency.

Holding in view, therefore, the similarity of the cases, and of the circumstances connected with them, I trust that the observations annexed to them will also be found not only compatible with, but illustrative of each other.

THE END.

Preparing for the Press.

BY THE SAME AUTHOR.

A TREATISE ON THE COMMON FEVER OF THIS COUNTRY: especially respecting its varied prevalence and urgency in different seasons, as observed in the Metropolis particularly, during the last twenty years; with a connecting review of the influence mutually exerted between its changes and symptoms and those of Eruptive Fevers, as well as of both acute and chronic affections of the Viscera.

To this will be added, a succinct examination of the several opinions entertained with respect to the nature and origin of that common fever, and of the means which have been consequently employed with a view either to its prevention or remedy. Also, a concluding inquiry, how far the total neglect of humoral pathology is compatible with a just theory of Febrile Diseases.

